

Appl. No. 10/726,392
Amdt. dated January 4, 2006
Reply to Office Action of October 4, 2005

PATENT

REMARKS/ARGUMENTS

Claims 1-7, 14-21, 29, and 30 remain pending in the application and are presented for further examination, reconsideration, and allowance. Applicant, by this paper, amends claims 1, 5, 14, 19, 29, and 30. Applicant thanks the Examiner for indicating that claims 4 and 17 are allowable if rewritten in independent form. However, Applicant has not rewritten these claims in independent form at this time because of the amendments to the independent base claims from which they depend. Applicant believes claims 4 and 17 are allowable based at least on the allowability of the base claims in light of the amendments.

Discussion of Rejections Under 35 U.S.C. 112

Claims 1-7, 14-18, and 29-30 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner questions the interpretation of the term "corresponds to said wiring layer" as it appears in independent claims 1, 14, 29, and 30. Applicant concurs with the Examiner's belief that the term "corresponds" generally refers to "matching." Applicant amends claims 1, 14, 29, and 30 to indicate that the fifth insulation film is "formed so as to match a shape of said wiring layer." Applicant respectfully believes that the amendment overcomes the rejection and requests withdrawal of the rejection under 35 U.S.C. §112.

Applicant respectfully notes that independent claims 5 and 19 do not include the claim language in question, and thus the rejection of these claims under 35 U.S.C. §112 is believed to be inadvertent.

Discussion of Rejections Under 35 U.S.C. 103

Claims 1-3, 6, 7, 14-16, 18, 20, and 21 were rejected under 35 U.S.C. 103(a) as allegedly unpatentable over U.S. Patent No. 6,559,548 to Matsunaga et al. (hereinafter Matsunaga) in view of U.S. Patent No. 5,010,389 to Gansuage et al. (hereinafter Gansuage). Claims 5 and 19 were rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Matsunaga in view of Gansuage, and further in view of Japanese Publication JP 2001-177115 to Noda

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(hereinafter Noda). Claims 29 and 30 were rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Matsunaga.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art reference, or references when combined, must teach or suggest all of the claim limitations.

Applicant contends that the cited references, whether alone or in combination, fail to teach or suggest all claim limitations. Claim 1 recites a semiconductor device that includes "a fifth insulation film which is provided on said fourth insulation film and formed so as to match a shape of said wiring layer." Neither Matsunaga nor Gansuage teach nor suggest a fifth insulation film that is formed so as to match a shape of a wiring layer.

The passivation layer 97 described in Matsunaga does not match the shape of the wiring layer. In contrast, Matsunaga states: "The wiring layer 94c and the inter-level insulating layer 92c of the uppermost level are covered with a passivation layer." *Matsunaga*, at Col. 11, ll. 36-38. As shown in accompanying Figure 9, the passivation layer covers substantially the entire exposed surface, and thus, does not match a shape of a wiring layer. Gansuage does not describe any structure similar to the fifth insulation layer. Thus, claim 1 is believed to be allowable because neither Matsunaga nor Gansuage teach nor suggest all claim limitations.

Claims 14, 29, and 30 include similar features to that discussed above in relation to claim 1 and are believed to be allowable at least for the reasons presented above in relation to claim 1. Claims 2-4, 6-7, 15-16, 18, 20, and 21 depend, either directly or indirectly, from one of claims 1 and 14 and are believed to be allowable at least for the reason that they depend from an allowable base claim.

Applicant respectfully requests reconsideration and allowance of claims 1-3, 6, 7, 14-16, 18, 20, and 21. Applicant also respectfully requests allowance of dependent claims 4 and 17 previously indicated as allowable.

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Claims 5 and 19 recite a semiconductor device that includes “a fourth insulation film . . . made of polybenzoxazole resin.” Additionally, the fourth insulation film “adheres to said metal layer while protecting said third insulation film.”

None of the cited references teaches the fourth layer that has all of the claimed features. Noda describes a surface protective film 12 that is coated with an organic insulating film 13 of polyimide or polybenzooxazole. *Noda*, Abstract. However, Noda does not teach nor suggest that a polybenzoxazole resin can be used as a fourth insulating layer that “adheres to said metal layer while protecting said third insulation film.” Thus, the combination of Noda with Matsunaga and Gansuage fails to teach or suggest all features of the claims.

There is nothing in any of the cited references that suggests the desirability of having a fourth insulation film made of polybenzoxazole resin. The fact that Noda describes an insulating film of polyimide or polybenzooxazole does not provide any motivation or suggestion of using a polybenzoxazole resin as a fourth insulation film that “adheres to said metal layer while protecting said third insulation film.” Thus, the cited references do not teach nor suggest all claimed features, and there is no motivation to modify or combine the teachings of the references in a manner that would result in Applicant’s claimed invention. Applicant respectfully requests reconsideration and allowance of claims 5 and 19.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

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If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 858-350-6100.

Respectfully submitted,



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